



Proposed ESD for Detrex Source Remedy

Fields Brook Superfund Site

Meeting with EPA

November 16, 2011

Detrex ESD

- The remedy proposed in the Detrex ESD is:
 - › *Fundamentally* different from the ROD remedy in terms of performance and scope – containment vs. aggressive treatment
 - › Not consistent with EPA's policy on "Principal Threat Waste"
 - › Endorsing an inferior remedial approach that was rejected in the ROD
- Remedy operation challenges discussed in the ESD (siltation, crystal formation) have been successfully addressed at other sites
 - › The approach utilized by Detrex to-date has been flawed
 - › Appropriate implementation can reduce DNAPL to residual state at this Site

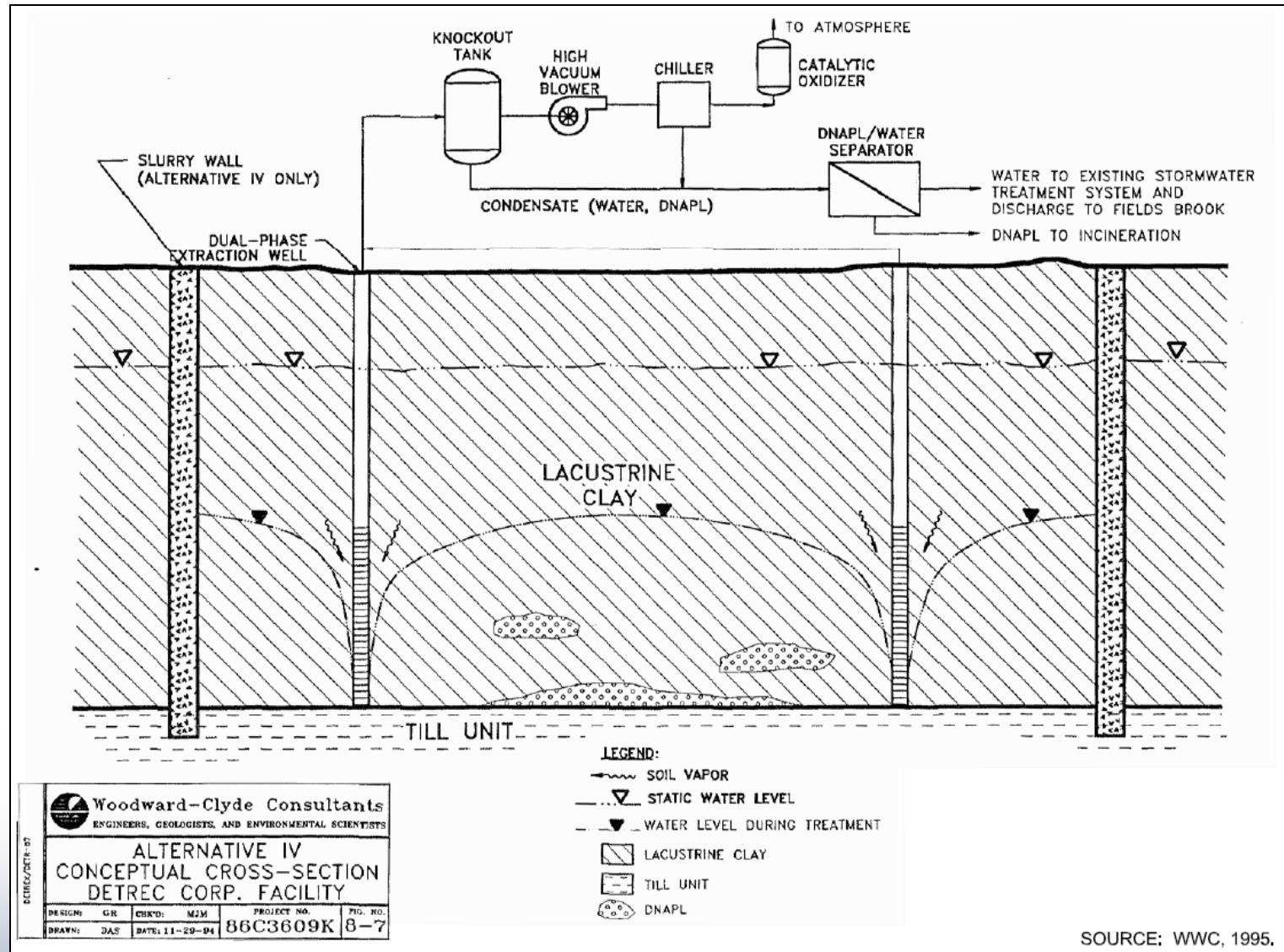
Need for a ROD Amendment

- EPA guidance document states that ROD amendment needed if scope, performance, and cost of change is fundamentally different
- Scope
 - › Containment vs. treatment
 - › *Physical area of response*
 - › *Remediation goals to be achieved*
- Performance
 - › *Long term reliability of remedy*
- EPA guidance document (p. 7-4) provides a similar example of a fundamental change
 - › Containment to treatment

ROD Requirements – Source Remedy

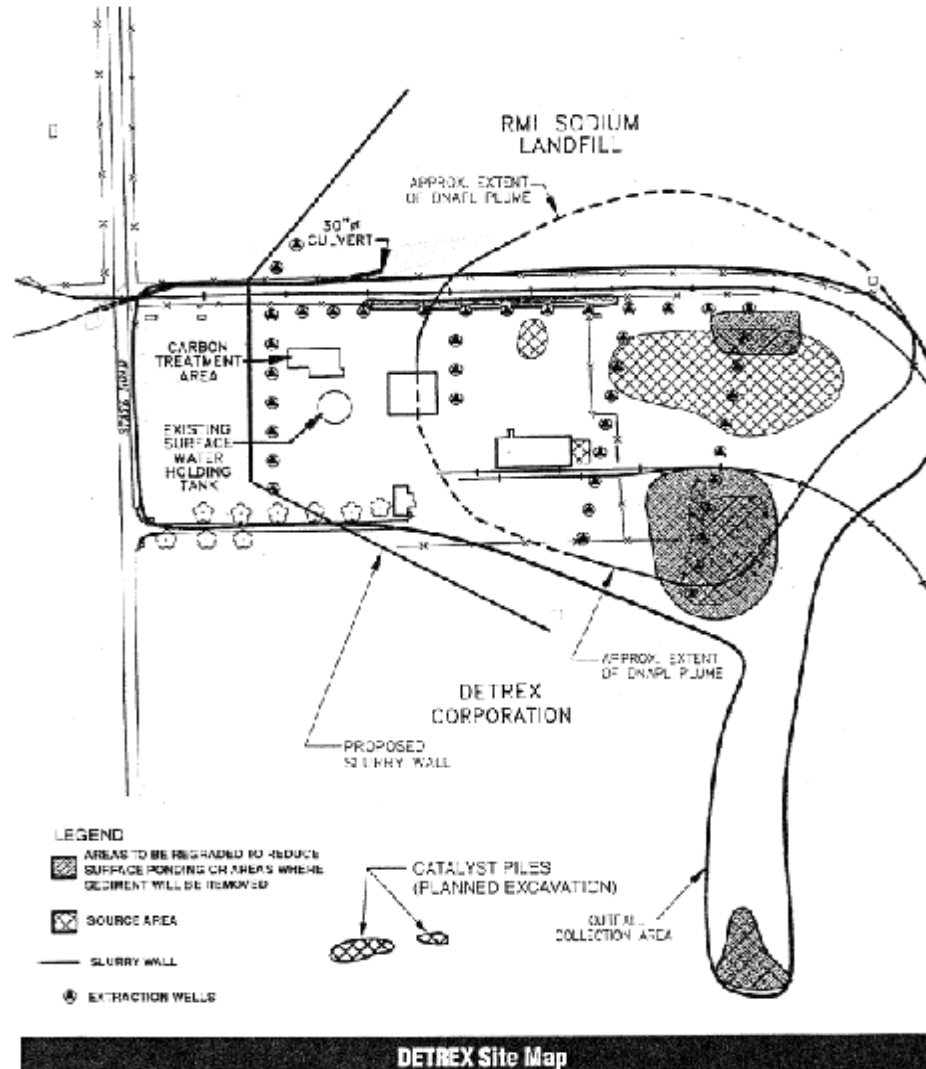
- Detrex DNAPL is a “Principal Threat Waste” requiring treatment /destruction consistent with EPA guidance (EPA, 1991)
 - › EPA guidance states remedial approach for “highly mobile material to focus on treatment options rather than containment approaches”
- ROD selected an aggressive extraction and treatment (vacuum-enhanced extraction) remedy to address DNAPL as Principal Threat Waste
- ROD also referred to EPA guidance for DNAPL treatment to: “remove free-phase, residual and vapor phase DNAPL” (p. 44)
 - › ROD envisioned addressing all DNAPL phases (p. 45)
- These positions are reiterated in 2009 Five Year Review

Schematic of ROD-Required Vacuum Enhanced Remedy



ROD Remedy Well Layout

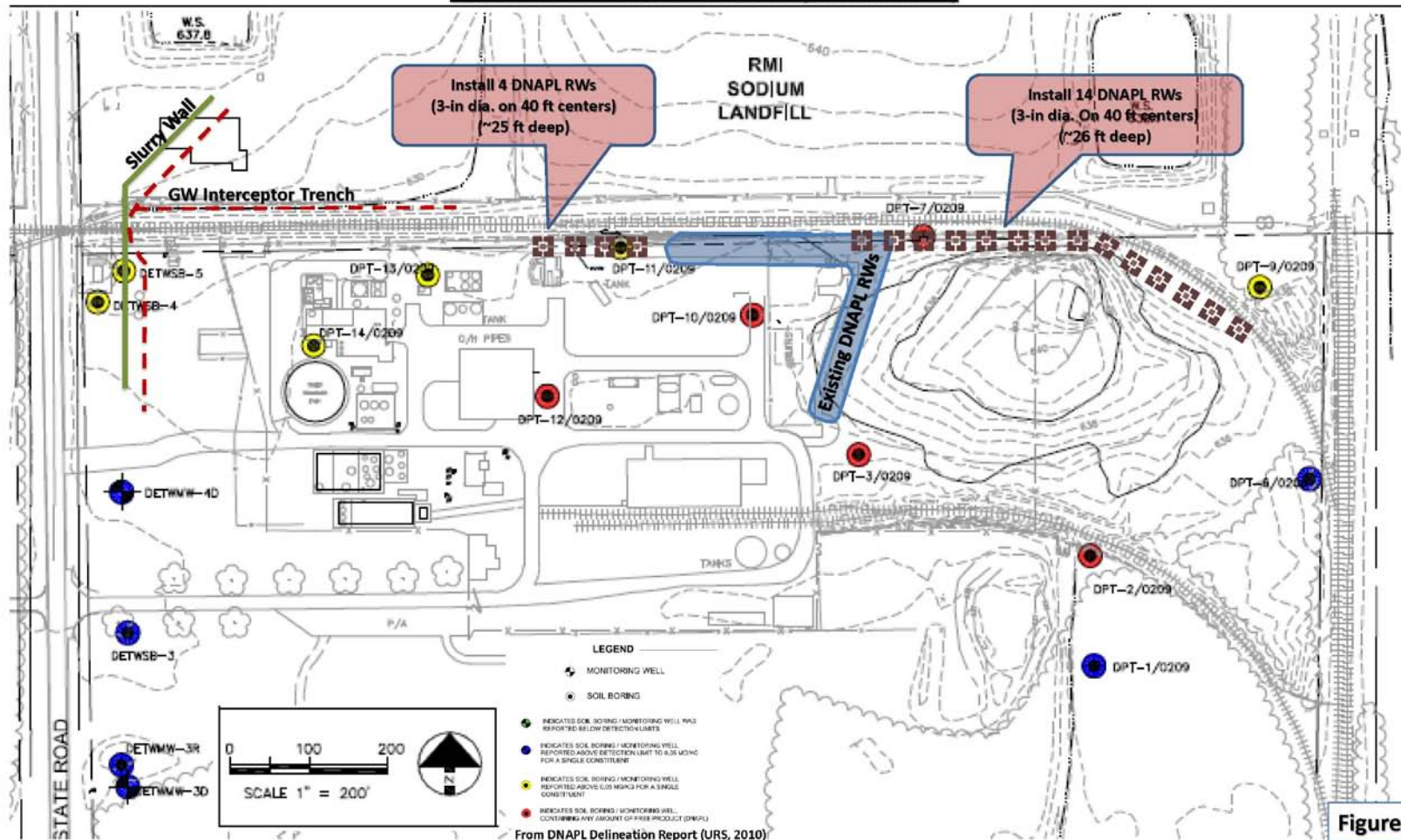
Figure 1
Extent of the Detrex DNAPL Plume (Figure 7 from the SCOU ROD)
Fields Brook Superfund Site, Ashtabula, OH



Detrex-Proposed DNAPL Recovery Wells

Conceptual Design – Additional DNAPL Recovery Wells Schematic

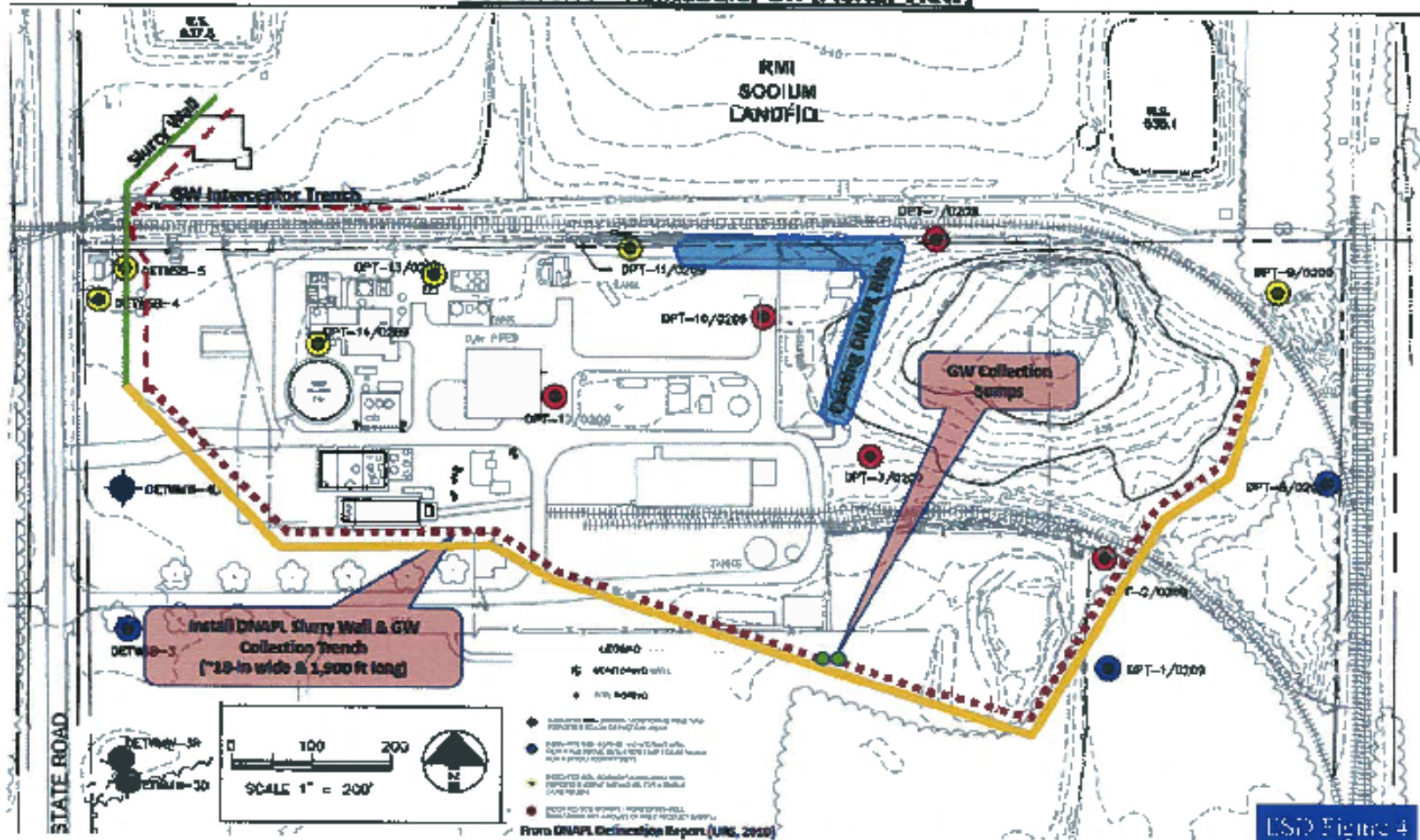
Detrex Site – Ashtabula, OH (Aerial View)



Detrex-Proposed Slurry Wall

Conceptual Design –DNAPL Slurry Wall & GW Collection Trench Schematic

Detrex Site – Ashtabula, OH (Aerial View)



Detrex-Proposed DNAPL Soil Management Area

Conceptual Design – DNAPL Recovery Soils Management Area Location

Detrex Site – Ashtabula, OH (Aerial View)

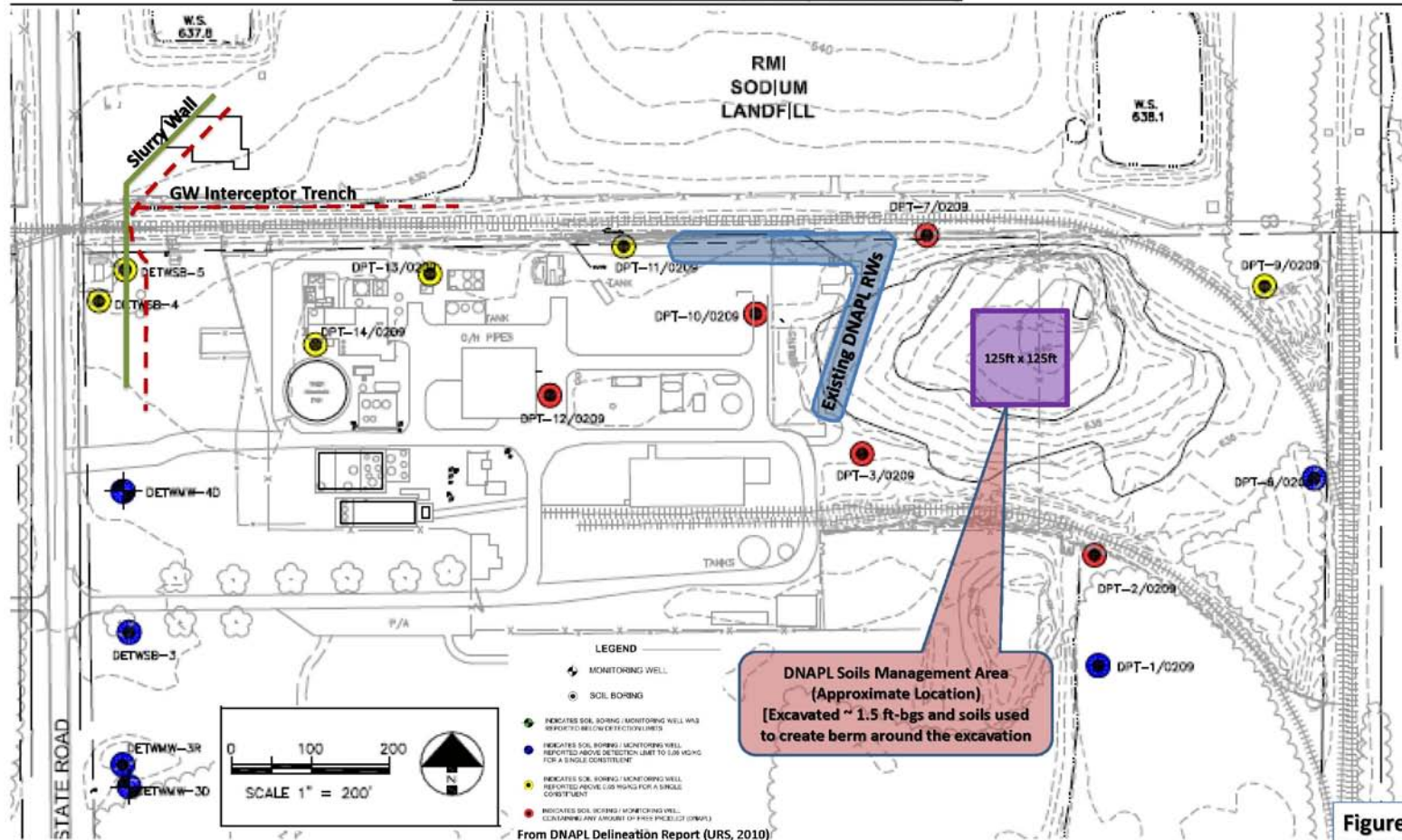


Figure 3-3

Detrex Source Remedy Proposal Issues

- Detrex proposed remedy is a passive containment system – inconsistent with ROD
 - › Does not meet “treatment” requirements for Principal Threat Waste
 - › Passive, manually-operated, gravity-fed DNAPL recovery system *versus* ROD-approved vacuum-enhanced extraction system
 - › Wells located along edges of lagoons – allows for only containment rather than mass removal
 - › Only addresses free phase DNAPL vs. ROD requirement that all phases (vapor, dissolved, and free) be addressed